24 Apr 1991

VO1JG-F

VOLTMETER, ANALOG, ELECTRONIC

1. GENERAL. This procurement requires a solid-state, average responding, rms indicating, analog ac voltmeter.

2. CLASSIFICATION. Type II, Class 3, Style E, and Color R in accordance with MIL-T-28800 for shipboard applications.

3. MEASUREMENT REQUIREMENTS. The equipment shall be capable of measuring ac voltages within the minimum ranges, accuracies, and sensitivities specified below. The meter shall respond to the average value of the input signal and shall be calibrated in rms volts and decibels.

3.1 Frequency range. 10 Hz to 2 MHz.

3.2 Voltage measurement. Range: 1 mV to 300V full scale. Resolution: 1% of full scale.

3.2.1 Voltage measurement accuracy. ±2% of indication.

3.3 Decibel measurement. Range: -70 dBm to 52 dBm. Resolution: 0.1 dB.
0 dBm = 1mW referenced to 600 ohms.

3.3.1 Decibel measurement accuracy. ±0.2 dB of indication.

3.4 Input. The equipment shall be provided with a three-terminal, banana-jack input on 19.05 mm (3/4 in) centers. The equipment shall be capable of input isolation of at least ±500V (dc + peak ac) above ground.

3.4.1 Input RC. 2 megohms shunted by 60 pF, nominal.

3.4.2 Maximum input. 300 Vdc and 500 Vrms (not additive) on any range.

3.5 Indicator. A meter shall be provided with a taut-band movement having mirrored, linear dB and logarithmic voltage scales. A digital voltage and dB indicator with equivalent resolution capabilities along with an analog indicator designed for peaking and nulling is acceptable for this application.

4. GENERAL REQUIREMENTS.

4.1 Power source. MIL-T-28800 nominal and dc internal power source requirements are invoked as detailed below.

4.1.1 Nominal power source. Operation at 400 Hz is not required. Maximum power consum ption: 10W.

4.1.2 DC internal power source. Internal batteries and charger are required. Minimum operating time shall be 8 hours following a maximum recharge time of 16 hours.

4.2 Weight. 10 kg (22 lb) maximum.

4.3 Lithium batteries. Per MIL-T-28800, lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.